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Matthew Baker

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EXAMINER

RYCKMAN, MELISSA K

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/813,447	Applicant(s) BAKER ET AL.	
	Examiner MELISSA RYCKMAN	Art Unit 3773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8,10-20 and 35-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,10-14,17-20 and 35-40 is/are rejected.
- 7) ☒ Claim(s) 15,16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to claims filed 3/24/08, claims 1-6,8,10-20 and 35-40 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6,8, 10-14, 17, 18 and 35-40 are rejected under 35 U.S.C. 103(a) as being obvious over Logan et al. (PCT US00/15259) and further in view of White (U.S. Pub. No. 2004/0093077 A1).

Regarding Claim 1, Logan teaches a connector assembly (200) for use in making an anastomotic connection between an opening prepared at an end of a graft tissue (122) conduit and an aperture in a side wall of a body tissue conduit in a patient comprising: a body disposed annularly about a longitudinal axis and having axially spaced distal and proximal portions, the distal portion having a graft retention component (202) to secure the tissue of the graft tissue conduit about the opening to the connector assembly (200), and the proximal portion having a plurality of annularly spaced body fingers (204) that expand radially out to engage the interior surface of the side wall of the body tissue conduit about the aperture (Column 7, proximate lines 25-27). The connector assembly further comprises an outside-retention element

configured to annularly engage the exterior surface of the graft tissue conduit about the opening (outwardly extending barb portions of retention element 202, fig. 13). The outside-retention element is hingedly coupled to the distal portion of the body (the outside-retention element is made of nitinol, col. 7, ll. 18-34, therefore this is considered hingedly coupled to the distal portion of the body).

Logan does not teach the specific hinge as described in the claim, however White teaches a hinge. It would have been obvious to one of ordinary skill in the art to use the hinge of White as this would aid in the functionality of the device as the device would be able to be used in a variety of sized tissues and applications.

Regarding Claims 2 and 39, Logan teaches the connector assembly defined in claims 1 and 35, wherein the graft retention component (202) comprises an annular inside-retention element configured to engage the interior surface of the graft tissue conduit about the opening (fig. 4).

Regarding Claims 3 and 40, Logan teaches the connector assembly defined in claims 2 and 37, wherein the annular inside-retention element (202) has a cross-sectional area larger than the cross-sectional area of the graft tissue conduit (fig. 4).

Regarding Claim 4, Logan teaches the connector assembly defined in claim 2, wherein the annular inside-retention element (202) is unitary with the distal portion of the body (208).

Regarding Claim 5, Logan teaches the connector assembly defined in claim 2, wherein the annular inside-retention element (202) is coupled to the distal portion (208) of the body (Fig. 3).

Regarding Claim 6, Logan teaches the connector assembly defined in claim 2, wherein the annular inside-retention element (202) includes a plurality of annularly spaced inside-retention members that have free ends configured to engage the interior surface of the graft tissue conduit about the opening (fig. 4).

Regarding Claim 8, Logan teaches the connector assembly defined in claim 7, wherein the outside-retention element comprises a plurality of annularly spaced outside-retention members (fig. 13).

Regarding Claim 10, Logan teaches the connector assembly defined in claim 7, wherein the outside-retention element is rigidly connected to the distal portion of the body (fig. 12).

Regarding Claim 11, Logan teaches the connector assembly defined in claim 7, wherein the outside-retention element (outwardly extending barb portions of retention element 202, fig. 13) is slidably coupled to the distal portion of the body (Fig. 13).

Regarding Claim 12, Logan teaches the connector assembly defined in claim 7, wherein the outside-retention element (outwardly extending barb portions of retention element 202, fig. 13) is further configured to engage the exterior surface of the body tissue conduit about the opening (Fig. 13).

Regarding Claim 13, Logan teaches the connector assembly defined in claim 7, wherein the outside-retention element (outwardly extending barb portions of retention element 202, fig. 13) is configured to be at least partially proximal to the plurality of inside-retention members (fig. 13).

Regarding Claim 14, Logan teaches the connector assembly defined in claim 7, wherein the outside-retention element (outwardly extending barb portions of retention element 202, fig. 13) is configured to be at least partially in the same plane as the inside-retention element (fig. 13, a transverse plane).

Regarding Claim 17, Logan teaches the connector assembly defined in claim 1, wherein the radially outward expansion of the plurality of annularly spaced body fingers (204) is an elastic bending (fig. 31).

Regarding Claim 18, Logan teaches the connector assembly defined in claim 1, wherein the body has a medial portion between the proximal portion and the distal portion, wherein the medial portion includes at least one torsional element (206).

Regarding Claim 35, Logan teaches an apparatus for producing the anastomotic connection between the opening prepared at the end of the graft tissue conduit and the aperture in the side wall of the body tissue conduit in the patient comprising: the connector assembly defined in claim 1; and a delivery tool (100) having a first configuration and a second configuration, wherein the first configuration is configured for deforming the proximal portion of the connector assembly from an expanded configuration to a deformed configuration and to advance the deformed proximal portion of the connector assembly into the lumen of the body tissue conduit via the aperture (fig. 15a), and wherein the second configuration is configured for un-deforming the proximal portion of the connector assembly in the lumen of the body tissue conduit (fig. 30).

Regarding Claim 36, Logan teaches the apparatus defined in claim 35, wherein the loading tool is external to the cannulation of the connector assembly (fig. 5).

Regarding Claim 37, Logan teaches the apparatus defined in claim 35 further comprising a loading tool (134) having a body portion, wherein the body portion is configured to support the distal portion of the connector assembly and to define the resulting shape of the anastomotic connection external to the body tissue conduit (fig. 6).

Regarding Claim 38, Logan teaches the apparatus defined in claim 37, wherein the loading tool further comprises at least one tissue holder (190) configured to engage the exterior surface of the graft tissue conduit about the opening and to hold the graft tissue conduit about the graft retention component of the connector assembly (fig. 12).

Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan and White in view of Scholz et al. (US 6273912).

Logan and White teach all limitations of preceding dependent claim 1, but fails to teach wherein the opening is prepared by a length-wise axial incision from a toe point at the end of the graft tissue conduit to a heel point along the length of the graft tissue conduit, or wherein the opening is prepared by an incision oblique to the longitudinal axis of the graft tissue conduit from a toe point at the end of the graft tissue conduit to a first point along the length of the graft tissue conduit followed by a length-wise axial incision from the first point to a heel point further along the length of the graft tissue conduit. Scholz teaches a graft for end to side anastomosis wherein the opening is

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formed either by a length-wise axial incision from a toe point at the end of the graft tissue conduit to a heel point along the length of the graft tissue conduit (fig. 4b), or an incision oblique to the longitudinal axis of the graft tissue conduit (fig. 6b) in order to facilitate the anastomosis, increase compliance matching between the graft and the receiving artery, and optimize hemodynamic flow from the graft into the receiving artery. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Logan by preparing the opening as taught by Scholz in order to facilitate the anastomosis, increase compliance matching between the graft and the receiving artery, and optimize hemodynamic flow from the graft into the receiving artery.

Allowable Subject Matter

Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Ryckman whose telephone number is (571)-272-9969. The examiner can normally be reached on Monday thru Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jackie Ho can be reached on (571)-272-4696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MKR

/Melissa Ryckman/
Examiner, Art Unit 3773

/(Jackie) Tan-Uyen T. Ho/
Supervisory Patent Examiner, Art Unit 3773